

	L #	Hits	Search Text	DBs	Time Stamp
1	L1	37976	pencil	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2003/04/02 11:48
2	L2	136566	erase or erasable or erased or erasing or eraser	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2003/04/02 11:48
3	L3	643752	colorant or pigment or dye or coloring	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2003/04/02 11:48
4	L4	872	1 and 2 and 3	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2003/04/02 11:39
5	L5	146	1 same 2 same 3	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2003/04/02 11:40

	L #	Hits	Search Text	DBs	Time Stamp
6	L6	50	4 and (cohesion or cohesive or cohesiveness)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2003/04/02 11:49
7	FAMILY	1	2000-126780.NRAN.	DERWEN T	2003/04/02 11:42
8	L8	2	("5595700").PN.	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2003/04/02 11:44
9	L9	1	2 and 8	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2003/04/02 11:47
10	L10	119	(523/164).CCLS.	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2003/04/02 11:48
11	L11	5	10 and (cohesion or cohesive or cohesiveness)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2003/04/02 11:48

	L #	Hits	Search Text	DBs	Time Stamp
12	L12	16829	pencil	USOCR	2003/04/02 11:48
13	L13	9367	erase or erasable or erased or erasing or eraser	USOCR	2003/04/02 11:48
14	L14	94722	colorant or pigment or dye or coloring	USOCR	2003/04/02 11:49
15	L15	154	12 and 13 and 14	USOCR	2003/04/02 11:49
16	L16	11	15 and (cohesion or cohesive or cohesiveness)	USOCR	2003/04/02 11:50
17	L17	104	12 and (cohesion or cohesive or cohesiveness)	USOCR	2003/04/02 11:53
18	FAMIL Y	1	2002-350928.NRAN.	DERWEN T	2003/04/02 12:02
19	FAMIL Y	1	2000-126780.NRAN.	DERWEN T	2003/04/02 12:02

INTERNATIONAL SEARCH REPORT

International application No. PCT/US 99/14050
--

A. CLASSIFICATION OF SUBJECT MATTER

IPC6: C09D 13/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC6: C09D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	File WPI, Derwent accession no. 1990-085886, TOMBOW PENCIL CO: "Coloured lead of pencil and crayon - contain thermoplastic resin, lubricant, pigment and porous inorganic filler"; & JP 2036281, 19900206 --	1,8-13, 20-26,33, 35-42,44,48, 50-54,56
X	US 5595700 A (KATSUNORI KITAZAWA), 21 January 1997 (21.01.97), column 2, line 46 - column 3, line 60, claims 1,3, abstract --	1,8-9,11, 20-25,35, 40-48,50-51, 56-68
A	Patent Abstracts of Japan, abstract of JP 56-100874 A (MITSUBISHI PENCIL CO LTD), 13 August 1981 (13.08.81) --	1-68

Further documents are listed in the continuation of Box C. See patent family annex.

- * Special categories of cited documents:
- "A" document defining the general state of the art which is not considered to be of particular relevance
- "B" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed
- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
20 October 1999	17.12.1999

Name and mailing address of the International Searching Authority
European Patent Office P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk
Tel:(+31-70)340-2040, Tx 31 651 apo n.
Fax:(+31-70)340-3016

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FULL TEXT OF CASES (USPQ FIRST SERIES)

In re WIGGINS, JAMES, AND GITTOES, 179 USPQ 421 (CCPA 1973)

In re WIGGINS, JAMES, AND GITTOES

(CCPA)
179 USPQ 421

Decided Oct. 11, 1973

No. 8806

U.S. Court of Customs and Patent Appeals

Headnotes

PATENTS

1. Claims — Indefinite — In general (§ 20.551)

If scope of invention sought to be patented is unclear from language of claim, a rejection will lie under second paragraph of 35 U.S.C. 112.

2. Patentability — Anticipation — In general (§ 51.201)

Specification — Sufficiency of disclosure (§ 62.7)

Rejection of compound claims for anticipation under 35 U.S.C. 102(b) does not preclude reliance on additional evidence to show that one of ordinary skill in the art would have known how to prepare claimed compounds at time alleged invention was made; where it might be reasonably doubted that reference or patent application satisfies section 102 or section 112, other references can be cited as evidence of level of skill in the art.

3. Patentability — Anticipation — In general (§ 51.201)

Patentability — Invention — In general (§ 51.501)

Naming of compounds by reference does not constitute a description of invention within meaning of 35 U.S.C. 102(b), but nothing more than speculation about their potential or theoretical existence; mere naming of compound in reference cannot constitute a description of compound, particularly when evidence suggests that a method suitable for its preparation was not developed until a date later than that of reference; compounds so named are not "described in a printed publication" as meant by section 102(b); however, naming of compound may be used as evidence of obviousness under section 103 for all it fairly suggests to one of ordinary skill in the art.

4. Patentability — Evidence of — In general (§ 51.451)

In evaluating whether rejection under 35 U.S.C. 103 is proper, evidence not pertinent to a rejection under section 102(b), such as commercial success, unexpected results, etc., may have relevance.

Particular patents—Barbituric Acids

Wiggins, James, and Gittos, Barbituric Acids, claim 2 of application allowed; claims 1 and 10 refused.

Case History and Disposition:

Page 421

Appeal from Board of Appeals of the Patent Office.

Application for patent of Leslie Frederick Wiggins, John William James, and Maurice Ward Gittos, Serial No. 526,707, filed Feb. 11, 1966; Patent Office Group 120. From decision rejecting claims 1, 2, and 10, applicants appeal. Affirmed as to claims 1 and 10; reversed as to claim 2.

Attorneys:

JANES & CHAPMAN (LELAND L. CHAPMAN and JOHN R. JANES of counsel) both of New York, N. Y., for appellants.

S. WM. COCHRAN (JACK E. ARMORE of counsel) for Commissioner of Patents.

Judge:

Before MARKEY, Chief Judge, and RICH, ALMOND, BALDWIN, and LANE, Associate Judges.

Opinion Text

Opinion By:

ALMOND, Senior Judge.

This is an appeal from the decision of the Patent Office Board of Appeals sustaining the examiner's rejection of claims 1, 2, and 10 of appellants' application directed to compounds useful for treating Parkinson's disease. All these claims were rejected under 35 U.S.C. 102(b) and claims 1 and 10 were rejected under 35 U.S.C. 112. We reverse in part and affirm in part.

Invention

Appellants' invention is most broadly set forth in claim 1 reproduced below:

1. A compound having anti-Parkinsonism activity selected from the class consisting of compounds of the formula:

Graphic material consisting of a chemical formula or diagram set at this point is not available. See text in hard copy or call BNA PLUS at 1-800-452-7773 or 202-452-4323.

and pharmaceutically acceptable salts thereof, in which formula X is selected from the group consisting of oxygen and sulphur, R₁ is selected from the group consisting of:

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wherein R₃ represents lower alkyl.

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R₄ represents lower alkyl and A represents a group selected from the class consisting of unsubstituted and methyl-substituted straight-chain alkylene of two to three chain carbon atoms;
Graphic material consisting of a chemical formula or diagram set at this point is not available. See text in hard copy or call BNA PLUS at 1-800-452-7773 or 202-452-4323.

represents a saturated heterocyclic group of five to seven ring atoms, from one to two nitrogen atoms, and up to one oxygen atom, and A represents a group selected from the class consisting of unsubstituted and methyl-substituted straight-chain alkylene of two to three chain carbon atoms; and

(C) R₅-(CH₂)n-, wherein n is a positive whole number up to 2 and R₅ is a saturated heterocyclic group of five to seven ring atoms, up to one oxygen atom and from one to two nitrogen atoms, said heterocyclic group containing a member selected from the group consisting of unsubstituted and lower-alkyl-substituted basic ring nitrogen atoms spaced away from the adjacent carbonyl groups in the barbituric acid ring by from three to five carbon atoms; and R₂ is selected, when X is oxygen, from the group consisting of:

(D) phenyl, halogenophenyl, hydroxyphenyl, lower alkylphenyl and lower alkoxyphenyl; and when X is sulphur, from the group consisting of:

(E) phenyl, halogenophenyl, hydroxyphenyl, lower alkylphenyl, lower alkoxyphenyl, cyclohexyl, benzyl and straight-chain and branched chain alkyls having from three to seven carbon atoms.

Dependent claim 2 is somewhat narrower in scope than claim 1 in its definition of R₁ and R₂. Claim 10 is directed to the "acid addition salt form" of the compound of claim 1.

When X is oxygen, the compounds embraced by claim 1 are referred to as "oxobarbituric acids." Similarly, when X is sulfur, the compounds are referred to as "thiobarbituric acids." According to appellants' specification, these compounds are useful for the treatment of Parkinson's disease (paralysis agitans), a disease of the nervous system sometimes referred to as "shaking palsy."

The compounds encompassed by the claims can, for the most part, be prepared by a process well known to the prior art involving the condensation of urea or thiourea with a disubstituted malonic ester in the presence of a refluxing solution of sodium in an alcohol (a sodium alcoholate). The disubstituted malonic ester has the formula:

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wherein R is a lower alkyl group, preferably ethyl. Appellants term this process a "high temperature condensation."

Appellants found that certain oxo-and thiobarbituric acids could not be prepared this way because the malonic ester required for the synthesis was unstable and decomposed in the refluxing solvent. The malonic esters susceptible to this decomposition are described by appellants as those having the formula:

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wherein R₁ represents:

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wherein R₃ represents a lower alkyl group and A represents an unsubstituted or

methyl-substituted straight-chain alkylene radical having 2 or 3 chain carbon atoms; or

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wherein

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represents a heterocyclic group containing from five to seven ring atoms and A represents an unsubstituted or methyl-substituted straight-chain alkylene radical having 2 or 3 chain carbon atoms; or

(C) R₅- (CH₂)_n-, wherein n is 1 or 2 and R₅ represents 2-pyridyl or N-methyl-2-piperidinyl; and

Z represents hydrogen or at least one halogen, lower alkyl or lower alkoxy substituent, provided that when R represents a dimethylaminoalkyl group which is not substituted by methyl in the alpha position of the alkyl group, Z cannot represent hydrogen, but must be at least one halogen, lower alkyl or lower alkoxy substituent.

Appellants discovered that decomposition of the malonic ester could be avoided by carrying out the condensation at or below 30°C. However,

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at this temperature only the thiobarbituric acids could be obtained since urea, unlike thiourea, would not undergo condensation. Therefore, in order to obtain oxobarbituric acids which could not be prepared by the prior art process, appellants added yet another refinement to their process. First, they prepared the thiobarbituric acid analogue of the desired oxobarbituric acid which was then oxidized by a known process to the corresponding oxobarbituric acid. Appellants refer to this process as a "low temperature condensation."

Opinion

Rejection Under § 112

In support of the rejection of claims 1 and 10 under § 112, the examiner, in his "Supplemental Examiner's Answer On Remand," made the following observations:

The definitions of

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and "R₅" are indefinite and too broad. The definitions particularly point out the nature of only one, two, or three, of the five to seven ring atoms. The claims are indefinite as to what other ring atoms can be present. The claims are also indefinite as to what and how many substituents the heterocyclic groups can have, if any. The claims are too broad in that there is no proper support for such rings as pyrazolidinyl, isoxazolidinyl, oxadiazolidinyl, etc.—i.e. rings wherein the heteroatoms are not separated by carbon atoms.

Re the rejection as failing to properly define the invention, appellants argue first that "a saturated heterocyclic group of * * * from one to two nitrogen atoms, and up to one oxygen atom" means "a saturated heterocyclic group in which the heteroatoms are all selected from the group consisting of from one to two nitrogen atoms and up to one oxygen atom". Concededly, this is a possible construction of the language, but the language is open to other interpretations. * * *

Support for appellants' construction may be found in the fact that the specification discloses only heterocyclic groups containing nitrogen or nitrogen and oxygen.

It would appear that the examiner was of the opinion that appellants were claiming an invention that was broader than any described in their specification (a 1st paragraph, § 112 rejection) and were not distinctly claiming that which they regarded as their invention (a 2nd paragraph, § 112 rejection). The board agreed with the examiner's rejection, commenting, in part, as follows:

Appellants' arguments do not persuade us of error in the examiner's rejection. The terminology employed is so loose as to be indefinite and to be entirely speculative as to the inclusion of groups forming final products having the therapeutic activity herein required. * * *

It must also be noted that the claim terminology is so broad that it does not even require that the heterocyclic group contain a carbon atom. Heterocyclic ring systems containing phosphorus, boron, silicon, and other elements in addition to nitrogen and oxygen without the inclusion of carbon atoms are well-known and could not be expected to produce compounds having the properties herein claimed.

[1] In our view, the rejection under § 112 was properly made, at least insofar as it was based on the 2nd paragraph of § 112. That paragraph requires the applicant to "particularly point out and distinctly claim the *subject matter sought to be patented* ." In re Borkowski, 57 CCPA 946, 951, 422 F.2d 904, 909, 164 USPQ 642, 645 (1970). If the scope of the invention sought to be patented is unclear from the language of the claim, a second paragraph rejection will properly lie.

In the instant case, the Patent Office questions whether the term "heterocyclic group" as defined in the claims possesses the requisite definiteness. Both the examiner and the board felt the term was not precise enough to allow the scope of the claims involved to be accurately determined. Appellants seek to overcome their specific criticisms by arguing that:

* * * the claims clearly define the *maximum* breadth, namely, heterocyclic rings containing carbon and nitrogen, or carbon, nitrogen, and oxygen, having from five to seven ring atoms, one or two nitrogen atoms, and up to one oxygen atom. This is a rather limited scope, as heterocyclic rings go. There are many more heterocyclic compounds excluded by the claims than are included by them, such as, for instance, heterocyclic rings containing the two or more oxygen atoms, three or more nitrogen atoms, or one or more sulfur atoms, as well as other types of hetero atoms.

However, we agree with the examiner that appellants' interpretation of the scope of the claim is but one possible construction and that other, broader constructions are possible that are not unreasonable in light of the words of the claims. Words in claims are to be given "their broadest reasonable interpretation consistent with the specification where the patent has not yet issued and the applicant has an opportunity to change them." In re Finsterwalder, 58 CCPA 871, 876, 436 F.2d 1028, 1032, 168 USPQ 530, 534 (1971).

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Applying this standard to claims 1 and 10, it is our view that the board was correct when it concluded that the "heterocyclic group" in those claims could be interpreted to include other members than those noted by appellants. Furthermore, the examiner, in his answer, indicated that appellants had support in the specification for a claim of the same scope that appellants would now have us give claims 1 and 10. Therefore, we do not think it would have been difficult to employ language in the claims *precisely* limiting them to that scope.

In view of our affirmance of the rejection under § 112 on the ground that the claims do not satisfy the requirements of the 2nd paragraph, it is not necessary for us to consider whether a rejection made under the 1st paragraph would have been justified.

Rejection Under Section 102(b)

The rejection of claims 1, 2 and 10 under section 102(b) was based upon an article ²published by Giudicelli et al. (Giudicelli). This reference reports the syntheses of a number of oxobarbituric acid derivatives (X=oxygen) and studies of their effect as sedatives. *None* of the compounds actually prepared and studied fall within the scope of the claims involved here. However, Giudicelli mentions by name two compounds that do, phenyl-beta-piperidinoethyl barbituric acid and phenyl-beta-morpholinoethyl barbituric acid, whose syntheses were unsuccessfully attempted. The examiner recognized that the failure of Giudicelli to make these compounds was a defect in the reference. Therefore, he cited a second reference, a patent to Donnison, ³which discloses a process for making oxo- and thiobarbituric acids. This process is similar to appellants' low temperature process.

The examiner concluded that Donnison's process could be used to prepare the compounds named by Giudicelli. The significance of this conclusion can be seen from the legal analysis of that situation, stated by him as follows:

Giudicelli et al. could not prepare these compounds by their chosen method. However, the test of an "enabling disclosure" is not whether the reference teaches how to make the compounds, but whether the reference taken with the remainder of "the prior art is such as to place the disclosed 'compound' in the possession of the public."

The examiner's authority for this test was the decision of this court in *In re Brown*, 51 CCPA 1254, 329 F.2d 1006, 141 USPQ 245 (1964). See also *In re LeGrice*, 49 CCPA 1124, 301 F.2d 929, 133 USPQ 365 (1962); *In re Sheppard*, 52 CCPA 859, 339 F.2d 238, 144 USPQ 42 (1964); *In re Hoeksema*, 55 CCPA 1493, 399 F.2d 269, 158 USPQ 596 (1968); *In re Collins*, 59 CCPA 1170, 462 F.2d 538, 174 USPQ 333 (1972). In his view, Giudicelli is an "enabling disclosure" since Donnison's process could be used to make the named compounds, thereby putting them in the possession of the public. The board agreed.

The examiner's rationale necessarily presumes that Giudicelli both describes the invention and would enable one skilled in the art to make the invention, the former by merely naming the compounds and the latter by viewing Donnison as evidence that one skilled in the art could make the named compounds, thereby making them available to the public.

Appellants argue that the rejection is improper since Giudicelli by itself does not disclose all that is necessary to put the compounds in the hands of the public. Because the Patent Office had to rely upon Donnison to overcome this defect in Giudicelli, appellants insist that the rejection must be considered as having been made over a combination of references. In their view, a rejection based upon a combination of references is proper only if the statutory basis is 35 U.S.C. 103. Alternatively, appellants argue that the process taught by Donnison could not be used to make the named compounds.

The solicitor states the issue as to whether § 102(b) can be the proper statutory basis as follows:

Does the rejection of compound claims for anticipation under 35 U.S.C. 102(b) preclude reliance on additional evidence to show that one of ordinary skill in the art would have known how to prepare the claimed compounds at the time appellants' alleged invention was made?

[2] The answer to the solicitor's question, and certainly the one desired by him, must be "No." Every patent application and reference relies to some extent upon knowledge of persons skilled in the art to complement that disclosed in order that it be "enabling" within the meaning of § 112 and to satisfy the requirements of a reference under § 102. For example, a reference describing an oil refinery need not describe how to make bolts and rivets in order to be considered "enabling." The hypothetical just stated is an extreme case. In closer cases, where it might be reasonably doubted that a reference or patent application satisfies § 102 or § 112, other references can be cited as evidence of the level of skill in the art.

[3] However, we do not think that the outcome of this case revolves about the answer to the above-stated question. The defect in the issue, as stated by the solicitor, is that it presumes

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that the naming of the compounds by Giudicelli constitutes a description of the invention within the meaning of § 102(b). We do not accept this presumption. In our view Giudicelli's listing of the compounds by name constituted nothing more than speculation about their potential or theoretical existence. The mere naming of a compound in a reference, without more, cannot constitute a description of the compound, particularly when, as in this case, the evidence of record suggests that a method suitable for its preparation was not developed ⁴until a date later than that of the reference.

If we were to hold otherwise, lists of thousands of theoretically possible compounds could be generated and published which, assuming it would be within the level of skill in the art to make them, would bar a patent to the actual discoverer of a named compound no matter how beneficial to mankind it might be. In view of the fact that the purpose sought to be effectuated by the patent law is the encouragement of innovation, such a result would be repugnant to the statute. Therefore, we hold that the compounds named in Giudicelli and within the scope of the claims in issue were not "described in a printed publication" as meant by the applicable portion of § 102(b). This dictates a reversal of the rejection of claims 1, 2 and 10 under that section.

Our holding does not mean that a reference merely naming a compound is without effect at all. It may be used as evidence of obviousness under § 103 for all it fairly suggests to one of ordinary skill in the art. In fact, the solicitor suggests in his brief that it wouldn't matter in this case whether we view the statutory basis of the rejection as § 102(b) or § 103. We cannot agree.

[4] In evaluating whether a rejection made under § 103 is proper, evidence not pertinent to a rejection made under § 102(b) may have relevance, i.e., commercial success, unexpected results, etc. For example, evidence of commercial success no matter how striking could not overcome a rejection of a claim based on its lack of novelty. It simply is not relevant or material to that point. Therefore, since we do not know what additional evidence appellants might have been able to present if their claims had been rejected under § 103, it would not be proper for us to conjecture whether such a rejection might be sustained.

For the foregoing reasons, the rejection of claims 1 and 10 under 35 U.S.C. 112 is *affirmed*, and the rejection of claims 1, 2 and 10 under 35 U.S.C. 102(b) is *reversed*.

Footnotes

Footnote 1. Serial No. 526,707 filed February 11, 1966.

Footnote 2. Annales Pharm. Francaises, Vol. 15, 1957, pp. 533-546.

Footnote 3. U. S. 2,876,225 issued March 3, 1959.

Footnote 4. We do not mean to suggest that we have actually evaluated the process taught by Donnison and concluded that it could be used to prepare the claimed compounds. As this is irrelevant to our decision, we express no opinion on this point.

- End of Case -

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FULL TEXT OF CASES (USPQ FIRST SERIES)
In re Sasse, Beck, and Eue, 207 USPQ 107 (CCPA 1980)

In re Sasse, Beck, and Eue

(CCPA)

207 USPQ 107

Decided July 17, 1980

As amended Aug. 26, 1980

No. 80-503

U.S. Court of Customs and Patent Appeals

Headnotes

PATENTS

1. Interference -- In general [\(§ 41.01\)](#)

Interference -- Practice [\(§ 41.60\)](#)

35 U.S.C. 135(b) operates as statute of limitations on copying claims for purpose of instigating interferences.

2. Interference -- In general [\(§ 41.01\)](#)

Interference -- Practice [\(§ 41.60\)](#)

Procedural statutory bar arises under 35 U.S.C. 135(b) proscribing instigation of interferences after specified interval, but substantive bar is not raised in ex parte context.

3. Interference -- In general [\(§ 41.01\)](#)

Pleading and practice in Patent Office -- Rejections [\(§ 54.7\)](#)

Nothing in In re Hanna, 58 USPQ 393, supports use of Section 135(b) as statutory grounds for ex parte rejection as distinguished from rejection based on reference; claims that are same as, or for substantially same subject matter as, claims of issued patent are presented for purpose of provoking interference proceedings; parties must be claiming same or substantially same subject matter in interferences; claims to genus and claims to species within it are not claims to same or substantially same subject matter in sense of 35 U.S.C. 135(b).

4. Patentability -- Anticipation -- Publications -- In general [\(§ 51.2271\)](#)

Proper test of description in publication as bar to patent as clause is used in 35 U.S.C. 102(b) requires determination of whether one skilled in art to which invention pertains could take description of invention in printed publication and combine it with his own knowledge of particular art and from this combination be put in possession of invention on which patent is sought; description in printed publication is inadequate as statutory bar to patentability under Section 102(b) unless this condition prevails.

5. Pleading and practice in Patent Office -- Evidence [\(§ 54.5\)](#)**Pleading and practice in Patent Office -- Rejections [\(§ 54.7\)](#)**

Whether those skilled in art already possessed necessary precursors is issue subject to shifting burden of proof; burden was shifted to applicant when Patent Office cited disclosure that expressly anticipated invention; applicant had to rebut presumption of operability of reference by preponderance of evidence; burden was then on Patent Office to rebut applicant's contention of nonenablement.

Particular patents -- Urea Compounds

Sasse, Beck, and Eue, Dichlorothiazolyl Urea Compounds and Herbicidal Compositions, rejection of claims 1-13 affirmed in part.

Case History and Disposition:

Page 107

Appeal from Patent and Trademark Office Board of Appeals.

Application for patent of Klaus Sasse, Gunther Beck, and Ludwig Eue, Serial No. 459,158, filed Apr. 8, 1974. From decision rejecting claims 1-13, applicants appeal. Affirmed in part.

Attorneys:

James F. Woods and Leonard Horn, both of New York, N.Y., for applicants.

Joseph F. Nakamura (Gerald H. Bjorge, of counsel) for Commissioner of Patents and Trademarks.

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Judge:

Before Markey, Chief Judge, Rich, Baldwin, and Miller, Associate Judges, and Re, Judge. *

Opinion Text

Opinion By:
Rich, Judge.

This appeal is from the decision of the United States Patent and Trademark Office (PTO) Board of Appeals (board) affirming the rejections of claims 1-13 in appellants' application serial No. 459,158, filed April 8, 1974, for "Dichlorothiazolyl Urea Compounds and Herbicidal Compositions," under 35 USC 102(b) as being anticipated by a prior art reference and 35 USC 135(b) as being statutorily barred by a prior art reference from which claims could have been copied. We reverse the rejection under 35 USC 135(b). We affirm the rejection under 35 USC 102(b).

The Invention

Appellants disclose that certain allegedly novel dichlorothiazolylurea (DCT urea) compounds exhibit herbicidal activity. These active compounds are stated to be particularly suitable for selectively combatting pre-emergent weeds in corn, cereals, cotton, and carrots. These compositions may be applied at a rate of between 0.1 to 15 kilograms/hectare (kg/ha) either before or after weeds appear. But as total herbicides they are supposedly effective only in the larger concentrations by means of a post-emergent application.

Table set at this point is not available. See table in hard copy or call BNA PLUS at 1-800-452-7773 or 202-452-4323.

The two Guillot patents are essentially identical, one the reissue of the other, and were treated by the board as one reference. Guillot discloses the use of 2-amino-4,5-dichloro thiazole (2-amino DCT) as a precursor for reaction with an alkyl isocyanate or a substituted carbamyl halide to produce N-2(4,5-dichlorothiazolyl) N, N'-dialkyl or N' alkyl ureas (DCT dialkyl or alkyl ureas), a herbicidal compound. The following syntheses are expressly set forth:

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and

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No method of preparing 2-amino DCT is disclosed by either Guillot patent.

Bachman does not relate to urea compounds at all. The disclosure describes the synthesis of certain halogenated 2-(2-thiazolyl) aminofuran-5-ones. But 2-amino DCT is specifically mentioned as a suitable reactant for the production of these compounds.

The Declaration Evidence

During examination, one of the inventors, Sasse, twice submitted declarations to over-come the rejection by the examiner under 35 USC 102(b). In the first declaration, he stated:

7. That based upon his own experience, 2-amino-4,5-dichlorothiazole is not obtainable from trichlorothiazole and ammonia. Rather, when trichlorothiazole and ammonia, dissolved in any ordinary solvent, such as ethanol, toluene, dioxan, tetrahydrofuran or dimethylformamide, are heated under normal pressure up to 100°C, no reaction at all occurs. When trichlorothiazole and ammonia, dissolved in, e.g., toluene or dioxan, are heated up to 150°C under pressure (of, e.g., about 10 atmospheres), only an almost black, tarry, and unidentifiable mass is formed from which no clear product can be isolated.

Furthermore, he declared that although Bachman mentions 2-amino DCT, no reference shows a method of preparing it.

In a second declaration, the necessary Guillot precursors were stated to be 2-methylamino or 2-ethylamino DCT. These compounds were alleged to be necessary to produce the alkylated DCTs which are claimed. Guillot supposedly found that all compounds of the general formula

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(X being -NCH₃®, -N-alkyl-, -S-, or -O-) were very unstable in an alkaline medium.

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Thus the 2-methylamino and 2-ethylamino DCTs disclosed by Sasse were supposedly rapidly converted into a tarry mass by an alkaline medium.

The Rejections

In his final office action and Answer, the examiner rejected appellants' claims on two statutory bases: 35 USC 102(b)¹because they are anticipated by a compound specifically disclosed by Guillot, and 35 USC 135(b),²because they are directed to "the same subject matter as claims" of Guillot.

Appellants' response to the §102(b) rejection was that the Guillot compound relied on was not supported by an enabling disclosure -- that one of ordinary skill in the art could not make it. The examiner's response was that modifications of the general synthetic procedures in Guillot would yield the alkyl DCT ureas explicitly mentioned by the patentee and claimed by appellants. Specifically, methylamine would be substituted for ammonia in a reaction with 2,4,5-trichlorothiazole (TCT) to produce the necessary 2-methylamino DCT precursor:

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The examiner contended that the Sasse affidavits did not affect the presumed operability of the methylamine modification, that one skilled in the art would expect the methylamine reaction to proceed even if a similar reaction with ammonia was inoperable.

On the §135(b) rejection, the examiner said applicants' claims were for the "same subject matter" as Guillot's claims and were barred by 35 USC 135(b) because not presented within one year of the issuance of Guillot's patent. The examiner found the *generic* claims in Guillot to "embrace" the same subject matter as appellants' species claims even though none of the patentees' species claims was directed to appellants' claimed compounds.

Board Decision

The board noted that appellants' burden is to prove that Guillot and Bachman were not enabling disclosures, more particularly that 2-amino DCT "cannot be [sic, could not have been] produced by one of ordinary skill in the art." Ammonolysis of a halide was declared to be well known, the conditions varying according to the starting halide. Citing Wagner and Zook,³ a new reference, heterocyclic amines were stated to be generally prepared by ammonolysis of the halide over a copper catalyst.

The Sasse declarations were found to lack any factual basis for concluding that one of ordinary skill in the art could not have made the needed precursor. Without more proof that the disclosures were nonenabling, the board sustained the §102(b) rejection.

The statutory bar of 35 USC 135(b) was held to govern the time allowed for either "copying the patent claims," as in an interference context, or for "receiving claims which do not patentably distinguish over the claims" of the reference. In re Hanna, 30 CCPA 1115, 136 F.2d 749, 58 USPQ 393 (1943). The board said:

Claim 1 of Guillot et al. encompasses, includes and contains the subject matter of the claims before us. The fact that it is drawn to generic subject matter does not obviate the fact that it encompasses the same subject matter of the appealed claims. The assertion of narrower claims which are encompassed by claim 1 of the patent and disclosed therein cannot avoid estoppel. It is clear from Guillot et al. that the specific 4,5-dichloro derivatives are included in the invention described and claimed by patentees. In re Schaumann et al., 572 F.2d 312, 197 USPQ 5; In re Samour, 571 F.2d 559, 197 USPQ 1.

Appellants concede priority of the generic invention to Guillot et al. but urge

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that this could not have meant concession of priority to the specifically claimed thiazole compounds. Clearly, priority of such compounds could have been determined in interference proceedings. Appellants failed to provoke an interference within the time set forth in 35 USC 135(b) and hence are estopped from obtaining claims to the same or substantially the same subject matter claimed and described by Guillot et al.

Whether or not 35 USC 135(b) is considered to be procedural or substantive in nature (In re McKellin, 529 F.2d 1324, 188 USPQ 428), we *do not view this section of the statute as an alternative for a rejection which is properly based under 35 USC 102*. [Emphasis ours.]

What the board meant by the last emphasized phrase, though clear on its face, nevertheless becomes obscure in the light of what it said in its opinion on reconsideration.

On Reconsideration

In view of its reliance on the newly-cited Wagner and Zook reference in affirming the examiner's §102(b) rejection, the board admitted that a new rejection had been made under the provisions of 37 CFR 1.196(b), which it had not mentioned. It offered appellants the options available to them under Rule 196(b). They elected to appeal here.

On the §135(b) rejection, the board said:

To whatever extent our decision regarding the affirmance of the rejection made under 35 USC 135(b) is ambiguous, we point out that we unequivocally stated that appellants are estopped from obtaining the claimed subject matter. 35 USC 135 provides the statutory basis for the rejection on the basis of statutory estoppel by reason of laches. *In re Frey*, 37 CCPA 1052, 182 F.2d 184, 86 USPQ 99. Under the liberal practice of declaring an interference, an interference could have been declared if the request had been submitted within the statutory time. Appellants failed to request the declaration of an interference. Accordingly, the rejection under 35 USC 135(b) is both proper and correct.

The request for reconsideration is granted to the extent that we have reconsidered our decision in light of appellants' arguments. Our decision is modified to the extent that our affirmance of the rejection of the claims under 35 USC 103 [sic, the PTO concedes the board intended §102] based upon additional art is denominated as a new rejection under 37 CFR 1.196(b). Our conclusion that the claims were properly rejected under 35 USC 135(b) remains unaltered and no further reconsideration with respect thereto will be entertained.

Opinion

35 USC 135(b)

[1] We set forth the judicial and legislative history of 35 USC 135(b) at length in *Corbett v. Chisholm*, 568 F.2d 759, 196 USPQ 337 (CCPA 1977). Essentially, this section operates as a statute of limitations on copying claims for the purpose of instigating interferences.

[2] The solicitor states, "there can be no serious doubt at this time that 35 USC 135(b) operates to effect a kind of statutory bar, estoppel or loss of right." We agree that a *procedural* statutory bar arises proscribing the instigation of interferences after a specified interval. But we do not agree that a substantive bar is raised by §135(b) in an ex parte context. The Commentary on the New Patent Act by P.J. Federico, 35 USCA at 37-38, is in accord in stating, "The sections just mentioned, 131 to 135, deal with *procedure* in the Patent Office, of which only a small part is reflected in the statute." (Emphasis added.) This statement complements our decision in *In re McKellin*, 529 F.2d 1324, 188 USPQ 428 (CCPA 1976), where §135(a) was also found to be procedural in nature.

During oral argument, the solicitor failed to show one instance in which this or any other court has approved the use of §135(b) as a substantive ground for rejection. He, like the board, mistakenly relied on *In re Hanna*, *supra*, to support such a proposition.

[3] We have carefully reviewed the 1943 Hanna opinion and find nothing whatever in it to support the use of §135(b) as a statutory ground of ex parte rejection, as distinguished from a rejection based on a reference. The argument ignores the context of the paragraph relied on, which is a part of the one section of the statute dealing with the declaration and deciding of *interferences* and their effects, not the patentability of inventions. Section 135 is entitled "Interferences." (Compare the titles of §§101, 102, and 103.) The Revisers' Note to §135 states that

The second paragraph [originally unlettered, now "(b)" by amendment] is based on title 35, U.S.C., 1946 ed., §51 (R.S. 4903, amended Aug. 5, 1939, ch.

R.S. 4903 was a statute dealing with the examination of applications by the Patent Office and responses thereto by applicants. Its pertinent part here was the second paragraph, effective Aug. 5, 1940, which read:

No amendment for the first time presenting or asserting a claim which is the same as, or for substantially the same subject matter as, a claim of an issued patent may be made in any application unless such amendment is filed within one year from the date on which said patent was granted.

Referring to that paragraph, the first draft of the 1952 Patent Act ⁴stated under "Chapter 5. Interferences," §44, that the paragraph "is transposed from R.S. 4903 * * * as being more appropriate under interferences." This is obviously so, since claims which are the same as, or for substantially the same subject matter as, claims of an issued patent are presented for the purpose of provoking interference proceedings. In interferences, the parties must be claiming the same or substantially the same subject matter. The PTO has shown no such situation to exist here but seems to rely on the fact that Guillot has broad claims which would "read on" or dominate appellants' claims. Claims to a genus and claims to species within it are not claims to the same or substantially the same subject matter in the sense of §135(b). Laying aside all the questions of time or delay, there has been no suggestion that appellants want, or could have, an interference. Section 135(b) is not applicable. The board was closer to the law when it said at the end of its first opinion that "we do not view this section [§135(b)] of the statute as an alternative for a rejection which is properly based under 35 USC 102."

As for the Hanna case, the whole discussion in the opinion relates to whether Hanna, having copied two of the three appealed claims from Anderson's patent after a delay of at least four years after it issued, had any basis for contending that he had been claiming substantially the same subject matter within two years of its issuance, under the law then obtaining as set forth in Chapman v. Wintroath, 252 U.S. 126 (1920). The court held that he had no basis for so contending. The decision and opinion in Hanna has no bearing on the issue here.

35 USC 102(b)

The second issue is whether Guillot anticipates the appealed claims. More particularly, did Guillot enable one skilled in the art at the time the invention was made to employ either the 2-methylamino or 2-amino DCT precursors in the explicitly disclosed reaction sequences which allegedly yield the claimed dialkyl and alkyl DCT ureas?

[4] The requirement that a §102(b) reference be an enabling disclosure was discussed by this court, interestingly, in a plant patent case, *In re LeGrice*, 49 CCPA 1124, 301 F.2d 929, 133 USPQ 365 (1962), but the principles are not limited to plant patents. The following excerpt continues to be the proper standard for determining whether there is enablement.

* * * the proper test of a description in a publication as a bar to a patent as the clause is used in section 102(b) requires a determination of whether one skilled in the art to which the invention pertains could take the description of the invention in the printed publication and combine it with his own knowledge of the particular art and from this combination *be put in possession of the invention on which a patent is sought*. Unless this condition prevails, the description in the printed publication is inadequate as a statutory bar to patentability under section 102(b). [Emphasis ours.]

See *In re Samour*, 571 F.2d 559, 197 USPQ 1 (CCPA 1978).

[5] Whether those skilled in the art already possessed the necessary precursors is an issue subject to a shifting burden of proof. To explain, when the PTO cited a disclosure which expressly anticipated the present invention, i.e., Guillot, the burden was shifted to the applicant. He had to rebut the presumption of the operability of Guillot by a preponderance of the evidence. *In re Jacobs*, 50 CCPA 1316, 318 F.2d 743, 137 USPQ 888 (1963). Appellants attempted to meet that burden by demonstrating that one skilled in the art would have been unable to produce the necessary precursors. The Sasse declarations (Sasse) have been relied on to show that conventional ammonolysis of a heterocyclic halide would have been a total failure; either TCT would fail to react with

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ammonia, it is said, or it would yield a useless, tarry mass.

The burden of proof was once more upon the PTO to rebut the Sasse contention of non-enablement. See *In re Payne*, 606 F.2d 303, 203 USPQ 245 (CCPA 1979). The board successfully did this in its new §196(b) rejection. Wagner and Zook clearly stated that heterocyclic amines, i.e., 2-methylamino and 2-amino DCT, were "quite often" prepared in that manner.

In this forum, the burden again rests on appellants who continue to rely on Sasse. They argue that Wagner and Zook failed to adequately manifest how 2-amino DCT could be prepared, and, therefore, does not rebut Sasse. We disagree.

One can reasonably conclude from the unambiguous assertions in Wagner and Zook that the needed Guillot precursors were capable of being synthesized by one skilled in the art and hence were in the public's possession. It was incumbent upon appellants to rebut the presumed operability of the copper catalyst method described in Wagner and Zook. As did the board, we find the Sasse declaration devoid of any persuasive factual bases for dismissing the proposed catalytic synthesis. Sasse does not employ any copper catalyst in the attempted preparation of the precursors. We therefore hold that Guillot, in view of the evidence in Wagner and Zook, contains an enabling disclosure of at least one compound which anticipates the present claims.

Summary

Accordingly, the decision of the board affirming the rejection of claims 1-13 under 35 USC 135(b) is *reversed* and the decision of the board affirming the rejection of claims 1-13 under 35 USC 102(b) is *affirmed*.

Affirmed.

Footnotes

Footnote 1. A person shall be entitled to a patent unless -- * * * * (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, * * *.

Footnote 2. Interferences * * * * (b) A claim which is the same as, or for the same or substantially the same subject matter as, a claim for an issued patent may not be made in any application unless such a claim is made prior to one year from the date on which the patent was granted.

Footnote 3. R. Wagner and H. Zook, Synthetic Organic Chemistry 666 (1953), states (footnotes omitted): Heterocyclic amines are quite often prepared by ammonolysis of the halides over a copper catalyst. The halogen atom in 9-chloroacridine is easily replaced by an amino group by heating to 120° with ammonium carbonate and phenol. Similarly, 2-chlorolepidine is converted to 2-aminolepidine (2-amino-4-methylquinoline)(78%).

Footnote 4. Proposed Revision and Amendment of the Patent Laws, Preliminary Draft with Notes, Committee Print, Committee on the Judiciary, House of Representatives, Jan. 10, 1950.

Footnote * The Honorable Edward D. Re, Chief Judge, United States Customs Court, sitting by designation.

- End of Case -

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